UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/823,733	03/30/2001	Edward L. Schwartz	74451.P126	5962

7590 01/06/2005	**EXAMINER**
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ART UNIT	PAPER NUMBER
2625	

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DATE MAILED: 01/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
	09/823,733	SCHWARTZ ET AL.
Office Action Summary	Examiner	Art Unit	
	Yubin Hung	2625	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-74 and 76-111* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *7-9,22-24,31-33,50-52,71-74 and 76-111* is/are allowed.

6)☒ Claim(s) *1-6,10-21,25-30,34-49 and 53-70* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 July 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

Response to Amendment/Arguments

1.   This action is in response to amendment filed July 22, 2004

2.   Claim 75 has been cancelled and claim 111 added. Claims 1-74 and 76-111 are

still pending.

3.   Claims 7-9, 22-24, 31-33, 50-52, 71-110 have previously been allowed.

4.   In view of applicant's amendment, objections to the drawings are withdrawn.

5.   In view of the applicant's amendment, objections to claims 4-9, 19-24, 29-42, 48-

55 and 68 are withdrawn. However, new objections are made to claims 4-9; see below.

6.   In view of the applicant's amendment, the 37 CFR 1.75 objections to claims 13,

40 and 42 are withdrawn. However, the objections to claims 68-70 are maintained; see

below.

7.   In view of the applicant's amendment, the 35 USC § 112 rejections to claims 10-

15 are withdrawn.

8.   Applicant's arguments, see P. 43, 2nd paragraph, line 2-6, of the amendment filed

07/22/04, with respect to the rejections of claims 65 and 68 under 35 USC § 103 have

been fully considered and are persuasive. Therefore, the rejection has been withdrawn.

However, upon further consideration, a new ground(s) of rejection is made. See the 35

USC § 103 rejections below.

9.   Regarding claims 1-6, 10-21, 25-30, 34-49, 53-64, 566, 67, 69 and 70,

Applicant's arguments filed 07/22/04 have been fully considered but they are not

persuasive; see below.

10.   **In remarks Applicant argued in substance:**

9.1   *(regarding claim 1) that JPEG2K does not disclose any data structure that may*

be used to indicate coefficients that are to be skipped for refinement sub-bit-

plane passing [sic] *processing and accessing memory to obtain coefficients for*

the refinement pass while accessing other coefficients that are not needed for the

refinement pass. (P. 40, lines 15-19.)

The examiner respectfully disagrees. First, the phrase "while accessing other

coefficients that are not needed for the refinement pass" from the above quote is

not part of the claim. Second, the reasoning for the rejection of the original claim

1, which includes the creation of a data structure used by the refinement pass

and the cleanup pass so as to access only needed coefficients (and skip the rest)

from memory, has been provided in the previous office action, but the applicant

has not objected to the reasoning.

9.2   *(regarding claims 5, 20, 43 and 44) that there is no motivation in the references*

to combine them. (P. 41, 3rd paragraph, line 5 – P. 42, 1st paragraph, line 2.)

The examiner respectfully disagrees. First, in response to applicant's argument

that there is no suggestion to combine the references, the examiner recognizes

that obviousness can only be established by combining or modifying the

teachings of the prior art to produce the claimed invention where there is some

teaching, suggestion, or motivation to do so found either in the references

themselves or in the knowledge generally available to one of ordinary skill in the

art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re*

Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the

motivation to combine is in the knowledge generally available to one of ordinary

skill in the art and has already been provided in the previous office action.

(Note: The secondary reference relied upon for the rejection is US patent

6,327,392 to Li, not Lei, as recited by the applicant.)

Applicant's argument regarding claims 6, 10-15, 21, 30, 37-42, 49 and 57-58 (P.

42, 2nd paragraph) is similar to that for claims 5, 20, 43 and 44 and is similarly

found un-persuasive.

9.3 *Regarding claims 5, 20, 43 and 44 (P. 41, 2ⁿᵈ paragraph); 34-36 and 53-55 (P.*

42, 3ʳᵈ paragraph); 66-67 and 69-70 (P. 43, last paragraph through P. 44, 1ˢᵗ

paragraph): Applicant's arguments rely on dependency, namely, the secondary

references for their respective rejections do not cure the deficiency of the primary

reference as applied to their respective parent claims. Since their respective

parent claims remain rejected, these arguments are moot.

Specification

11. Claims 4-9 and 63 are objected to because of the following informalities:

- Claim 4, line 2: the word "compromises" is extraneous. Claims 5-9 inherit this

  problem and are similarly objected to

- Claim 63, line 3: "refinement" should have been "cleanup" (as per lines 7-8 of the

  claim). **(Note: for examination purpose "refinement" will be interpreted as**

  "cleanup")

Appropriate correction is required.

Double Patenting

12. Applicant is advised that should claims 65-67 be found allowable, claims 68-70

will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When

two claims in an application are duplicates or else are so close in content that they both

cover the same thing, despite a slight difference in wording, it is proper after allowing

one claim to object to the other as being a substantial duplicate of the allowed claim.

See MPEP § 706.03(k).

Claim Rejections – 35 USC § 103

13.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

14.   Claims 1-4, 16-19, 25-29, 45-48, 56, 59-64 are rejected under 35 U.S.C. 102(b)

as being unpatentable over *JPEG 2000 Part I Final Committee Draft Version 1.0*, 16

March 2000 (hereinafter referred to as JPEG2K).

15.   Regarding claims1, and similarly claims 4, 26, 29, 59, 60, 63 and 64, JPEG2K

discloses

- performing a significance propagation pass on a group of coefficients
  [P. 94, lines 14-19]
- creating a data structure that indicates locations of coefficients in
  the group of coefficients that are to be processed in subsequent
  passes;
  [P. 93, D.3, lines 1-3 (initializing the data structure); P. 94,
  D.3.1,lines 1-5 (updating the data structure); P. 96, D.3.3, line 2
  (refinement pass); P. 97, D.3.4, lines 1-3 (cleanup pass). Note that
  the set of the binary state variables (i.e., significant states)

> constitutes the data structure and their values are only updated in the
> significance propagation pass]
>
> • performing a refinement sub-bitplane pass by accessing the data
>   structure to obtain information to identify coefficients to be skipped
>   for refinement (respectively, cleanup) sub-bitplane pass processing,
>   and accessing a memory storing the group of coefficient using the
>   information to only access coefficients identified as being in the
>   refinement (respectively, cleanup) pass, and coding refinement
>   (respectively, cleanup) bits accessed from the memory
>   [P. 94, lines 14-19; P. 96, D.3.3, lines 1-2 (refinement pass); P. 97,
>   D.3.4, lines 1-2 (cleanup pass). Note that storing the selected
>   coefficients in and accessing them from a memory is an inherent step.
>   In addition, since only coefficients indicated by the data structure
>   are selected for refinement (respectively, cleanup) processing, and
>   with the prevalence of random access memory, it is obvious to one of
>   ordinary skill in the art to only access coefficients identified as
>   being in the refinement (resp., cleanup) process]

JPEG2K does not expressly disclose that **the data structure is created while performing the significance propagation pass**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to create the data structure while performing the significance propagation pass. Applicant has not disclosed that creating the data structure while performing the significance propagation pass provides an advantage, is used for a particular purpose or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with either creating the data structure before the first significance propagation pass and updating its contents in subsequent significance propagation passes, as taught by JPEG2K [P. 93, D.3, lines 1-3; P. 94, D.3.1, lines 1-5] or creating the structure while performing the significance propagation pass as claimed because in both cases the data structure is available when the magnitude refinement pass or the clean-up pass is performed.

Therefore, it would have been obvious to of ordinary skill in this art to modify

JPEG2K by creating the structure while performing the significance propagation pass

to obtain the invention as specified in claim 1.

16.   Regarding claims 2, and similarly claim 27, JPEG2K further discloses

- a plurality of refinement (respectively, cleanup) bits are accessed and
  non-refinement (respectively, non-cleanup) bits are ignored
  [P. 94, lines 14-19; P. 96, D.3.3, lines 1-2 (refinement); P. 97,
  D.3.4, lines 1-2 (cleanup)]

17.   Regarding claim 3, and similarly claim 28, JPEG2K further discloses

- the group of coefficients comprises a code-block
  [P. 94, D.3, line 3]

18.   Claims 16-19 are apparatus claims for rejected methods claims 1-4, respectively,

and are similarly analyzed and rejected.

19.   Claim 25 is a medium claim for rejected method claim 1 and is similarly analyzed

and rejected.

20.   Claims 45-48 are apparatus claims for rejected methods claims 26-29,

respectively, and are similarly analyzed and rejected.

21.   Claim 56 is an article of manufacture claim for rejected method claim 26 and is

similarly analyzed and rejected.

22.   Claims 61, 62 are apparatus claims for rejected method claims 59, 60 and are

similarly analyzed and rejected.

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23.   Claims 5, 20, 43, 44 are rejected under 35 U.S.C. 103(a) as being unpatentable

over JPEG2K as applied to claims 1-4, 16-19, 25-29, 45-48, 56, 59-64 above, and

further in view of Li (US 6,327,392).

24.   Regarding claim 5, and similarly claim 43, JPEG2K discloses everything except

the following:

- a first data structure is created for refinement bits and a second data structure is created for cleanup bits during the significance propagation pass

However, Li teaches the use of different lists (LIP, LSP and LIS) to indicate different

types of coefficients [Col. 10, lines 41-51].

Li and JPEG2K are combinable because they are from the same field of endeavor of

still image compression.

At the time of the invention, it would have been obvious to one of ordinary skilled in the

art to modify JPEG2K with the teaching of Li by using separate data structures (one for

refinement and another cleanup). The motivation would have been to reduce the size of

the data since some coefficients (e.g., those just become significant in the immediately

preceding significance propagation pass, see JPEG2K, P. 96, D3.3, lines 1-2) are neither processed in the refinement nor in the cleanup passes and therefore needed not be indicated by their respective data entries.

Therefore, it would have been obvious to combine Li with JPEG2K to obtain the invention as specified in claim 5 (and similarly claim 43).

25.   Claim 20 is an apparatus claim for rejected method claim 5 and is similarly analyzed and rejected.

26.   Regarding claim 44, JPEG2K further discloses

- the group of coefficients comprises a code-block
  [P. 94, D.3, line 3]

***

27.   Claims 6, 10-15, 21, 30, 37-42, 49, 57, 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over JPEG2K as applied to claims 1-4, 16-19, 25-29, 45-48, 56, 59-64 above, and further in view of Lei (US 6,272,180).

28.   Regarding claim 6, and similarly claim 30, JPEG2K discloses everything except the following:

- the data structure includes an indication of each run of refinement bits and the number of coefficients to skip in the group of coefficients before the next run of refinement bits

However, Lei teaches using run-length to encode runs of bits with identical value [Fig. 5, numeral 88; Col. 5, lines 62-65].

Lei and JPEG2K are combinable because they are from the same field of endeavor of compression.

At the time of the invention, it would have been obvious to one of ordinary skilled in the art to modify JPEG2K with the teaching of Lei by using un-length encoding to indicate each run of refinement bits and the number of coefficients to skip. The motivation would have been to reduce the size of the data since run-length encoding is a simple but an efficient way to represent runs of identical data.

Therefore, it would have been obvious to combine Lei with JPEG2K to obtain the invention as specified in claims 6 and 30, respectively.

29.   Regarding claims 10-15 and similarly claims 37-42, JPEG2K and Lei disclose everything except the following:

- (Claim 10.) The method defined in Claim 1 wherein the indication of each of run of refinement bits is stored as an integer
- (Claim 11.) The method defined in Claim 10 wherein the integer comprises a minimal size integer
- (Claim 12.) The method defined in Claim 1 wherein the indication of a number of coefficients to skip is stored as an integer
- (Claim 13.) The method defined in Claim 10 wherein the integer comprises a minimal size integer
- (Claim 14.) The method defined in Claim 1 wherein the indication of each of run of refinement bits and the number of coefficients to skip are stored as integers

- (Claim 15.) The method defined in Claim 14 wherein the integers comprise minimal size integers

However, it is well known in the art that integer data type is widely supported in computers and to use the minimal size integer to store values that by nature are of an integer type.

JPEG2K and Lei can be realizable in a stand-alone computer or an embedded processor.

At the time of the invention, it would have been obvious to one of ordinary skilled in the art to modify JPEG2K and Lei by storing the indications of the runs and the numbers of coefficients to skip (both are clearly of an integer type by nature) as a minimal size integer. The motivation would have been to make the method realizable in a wide array of computers (since, for example, if stored as a floating number, then the method may not be realizable in many simple processors that do not support floating arithmetic) as well as to minimize the storage requirement.

Therefore, it would have been obvious to use the well-known technique of using minimal size inter in combination with the combined invention of Lei and JPEG2K to obtain the inventions as specified in claims 10-15 and 37-42.

30.   Claim 21 is an apparatus claim for rejected method claim 6 and is similarly

analyzed and rejected.

31.   Claim 49 is an apparatus claim for rejected method claim 30 and is similarly

analyzed and rejected.

32.   Regarding claim 57, the analyses for claims 1, 6, 26, 30 above discuss how all its

limitations, with the exception of the use of a context model accessing a memory, are

anticipated or suggested by JPEG2K and Lei.

Regarding the use of a context model accessing a memory, JPEG2K discloses

the use of a context model [P. 94-97] and Lei discloses the use of a memory to store

data that are needed in the process [Fig. 4, numeral 74].

JPEG2K and Lei do not expressly disclose that the data structure(s) for the

refinement and the cleanup bit counts and skip counts are stored in the memory for

access by the context model.

At the time of the invention, it would have been obvious to one of ordinary skill in

the art to store the data structure(s) for the refinement and the cleanup bit counts and

skip counts in the memory for access by the context model. The motivation would have

been to eliminate the need to obtain data from a secondary storage such as a hard disk,

which has a much longer access time then a memory.

Therefore, it would have been obvious to store the data structure(s) for the refinement

and the cleanup bit counts and skip counts in the memory for access by the context

model to obtain the invention as specified in claim 57.

33.   Claim 58 is an apparatus claim for rejected method claim 57 and is similarly

analyzed and rejected.

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34.   Claims 34-36, 53-55 are rejected under 35 U.S.C. 103(a) as being unpatentable

over JPEG2K and Lei (US 6,272,180) as applied to claims 6, 30 above, further in view

of Miyashita et al. (US 5,754,696).

35.   Regarding claims 34-36, JPEG2K and Lei disclose everything except the

following:

- (Claim 34.) The method defined in Claim 30 wherein the indication of
  each of run of cleanup bits is represented with a variable length code
- (Claim 35.) The method defined in Claim 30 wherein the indication of a
  number of coefficients to skip is represented with a variable length
  code
- (Claim 36.) The method defined in Claim 30 wherein the indication of
  each of run of cleanup bits and the number of coefficients to skip are
  represented with variable length codes

However, Miyashita et al. teaches the use of variable length codes [Fig. 1, numeral 155; Col. 9, lines 10-12].

Miyashita et al., JPEG2K and Lei are combinable because they are from the same field of endeavor of still image compression.

At the time of the invention, it would have been obvious to one of ordinary skilled in the art to modify JPEG2K and Lei by encoding the indications of the runs and the numbers of coefficients to skip with variable length code. The motivation would have been to reduce the data size using a proven and effective encoding method that in turn will lower the storage requirement.

Therefore, it would have been obvious to combine Miyashita et al. with Lei and JPEG2K to obtain the inventions as specified in claims 34-36.

36.   Claims 53-55 are an apparatus claim for rejected method claims 34-36 and are similarly analyzed and rejected.

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37.   Claims 65, 68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jan (US 5,363,097), in view of Lindenstruth (US 6,067595).

38.   Regarding claim 65, and similarly claim 68, Jan discloses:

- a memory to store run counts and skip counts
  [Fig. 2, numeral 52; Col. 3, lines 28-33]
- decoding hardware coupled to the memory to decode a run count and a
  skip count obtained from the memory
  [Fig. 2, numeral 54; Col. 3, lines 28-33. Note that the VLD can decode
  (variable-length encoded) run count and skip count if they are the data
  accessed from the memory]

Jan neither expressly discloses that the counts are stored in two distinct portions

of the memory separated by a third portion **nor that the run count and the skip count**

are decoded simultaneously.

However, Lindenstruth teaches storing data in different portions of a multi-port

memory that are separated by other portion(s) that can be accessed and therefore

processed by multiple processors simultaneously. [Fig. 3, numerals 32', 34, 34'; Col.

15, lines 57-65. Note that Fig. 3, numeral 32' shows a 4-port memory. Therefore

processors 34 and 34' each accesses its respective data, say, run count and skip count,

from respective portions of the memory associated with their respective port. The other

two portions of the memory separate the portions for run counts and skip counts]

Lindenstruth and Jan are combinable because they have aspects that are from

the same field of endeavor of computer memory.

At the time of the invention, it would have been obvious to one of ordinary skilled

in the art to modify Jan with the teaching of Lindenstruth by storing different types of

data (such as run counts and skip counts) in different portions of a multi-port memory

that are accessed and processed by multiple processors (such as identical decoding

units of a piece of decoding hardware) simultaneously. The motivation would have

been to be able to perform parallel processing in order to increase the system

throughput.

Therefore, it would have been obvious to combine Lindenstruth with Jan to obtain

the inventions as specified in claim 65.

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39.   Claims 66-67 and 69-70 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Jan (US 5,363,097) and Lindenstruth (US 6,067595) as applied to

claims 65 and 68, further in view of Yamashita et al. (US 6,377,979).

40.   Regarding claims 66-67, and similarly claim 69-70, Jan and Lindenstruth disclose

everything except the following:

- (Claim 66.) The apparatus defined in Claim 65 wherein the third
  portion of the memory comprises an unused portion of memory between the
  two portions of memory.
- (Claim 67.) The apparatus defined in Claim 66 wherein the unused
  portion of memory is adjacent to the two portions of memory

Note that per the analysis for claim 65, it is clear that in the case of a dual-port

memory, the third portion will comprise the unused portion of the memory between the

two other (used) portions and will be adjacent to them.

While Jan and Lindenstruth do not expressly disclose the use of a dual-port memory, Yamashita et al. in [Fig. 2, numeral 20; Col. 3, lines 23-35] teaches the use of one.

Yamashita et al., Lindenstruth and Jan are combinable because they have aspects that are from the same field of endeavor of computer memory.

At the time of the invention, it would have been obvious to one of ordinary skilled in the art to modify Jan and Lindenstruth with the teaching of Yamashita et al. by a dual-port memory. The motivation would have been to be able to perform parallel processing in order to increase the system throughput without using memory with more ports than are needed to save cost.

Therefore, it would have been obvious to combine Yamashita et al. with Lindenstruth and Jan to obtain the inventions as specified in claim 66-67.

Allowable Subject Matter

41.   Claims 111, which draws to an article of manufacture containing instructions implementing the method of previously allowed claim 71, is also allowed.

Conclusion and Contact Information

42.   Applicant's amendment necessitated the new ground(s) of rejection presented in
this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP
§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37
CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE
MONTHS from the mailing date of this action. In the event a first reply is filed within
TWO MONTHS of the mailing date of this final action and the advisory action is not
mailed until after the end of the THREE-MONTH shortened statutory period, then the
shortened statutory period will expire on the date the advisory action is mailed, and any
extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of
the advisory action. In no event, however, will the statutory period for reply expire later
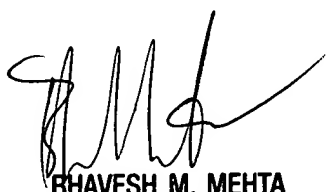than SIX MONTHS from the date of this final action.

43.   Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Yubin Hung whose telephone number is (703) 305-
1896. The examiner can normally be reached on 7:30 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Bhavesh Mehta can be reached on (703) 308-5246. The fax phone number

for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Yubin Hung
Patent Examiner
January 4, 2005

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